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# **Advancement Handbook for Electronics Warfare Technician (EW)**

**This Advancement Handbook was updated in September 1999.**

## **PREFACE**

The purpose of the Advancement Handbook is to assist EWs in preparing for Navywide advancement-in-rating examinations. The bibliographies (BIBs), together with this handbook, form a comprehensive examination study package. Since this handbook provides skill and knowledge components for each paygrade of the EW rating, it helps focus study on those areas that will be tested. This feature ensures Sailors will get the most out of their study time.

Each page in Parts 1 through 4 of this Advancement Handbook presents general skill areas, specific skill areas, the knowledge factors associated with each skill area, the pertinent references required to perform each skill, and the types of subject areas you can expect on the examination. The skill statements describe the skills you are expected to perform for each paygrade. They are cumulative; that is, you are responsible for all the skills for the paygrade for which you are competing, your present paygrade, and all paygrades below.

Although this handbook is very comprehensive, it cannot cover all the tasks performed by EWs. As a result, advancement examinations may contain questions more detailed than described in the "Exam Expectations" section of the skill areas.

Remember that advancement competition is keen, so your keys to advancement include not only comprehensive advancement examination study but also sustained superior performance.

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# **THE UNITED STATES NAVY GUARDIAN OF OUR COUNTRY**

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends; the United States Navy exists to make it so.

## **WE SERVE WITH HONOR**

Tradition, valor, and victory are the Navy's heritage from the past. To these may be added dedication, discipline, and vigilance as the watchwords of the present and the future.

At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families.

Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

## **THE FUTURE OF THE NAVY**

The Navy will always employ new weapons, new techniques, and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war.

Mobility, surprise, dispersal, and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past.

Never have our opportunities and our responsibilities been greater.

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## Part 1

### Advancement Handbook for EW3

## Advancement Handbook for EW3

|  |  |
|--|--|
| General EW3 <i>Skill</i> Area  | <b>Operational Planning</b>  |
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Prepare and maintain status boards and plots.</b>   |
| <i>Knowledge</i> you should have to perform this skill:  | <p>Ability to:</p> <ul style="list-style-type: none"> <li>• Select status board display requirements</li> <li>• Assemble status board information</li> <li>• Update status boards</li> <li>• Assemble EW plot information</li> <li>• Enter EW plot information into automated systems</li> </ul> |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• EWOBT Module 12</li> <li>• EWOBT Module 14</li> <li>• NWP 3-13.1.13</li> </ul>  |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about the elements of status boards and plot displays, information gathering and dissemination, and sources of data.  |

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| General EW3 <i>Skill</i> Area  | <b>Operational Planning</b>   |
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Prepare for operations against hostile forces based on current intelligence.</b>   |
| <i>Knowledge</i> you should have to perform this skill:  | <p>Ability to identify:</p> <ul style="list-style-type: none"> <li>• Threats using current intelligence</li> <li>• Capabilities to counter specific threats</li> <li>• Limitations to counter specific threats</li> </ul>                                 |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• AFTTP 3-1 Vol. 2</li> <li>• EMCAP Users Guide</li> <li>• EPL</li> <li>• EWOBT Module 5</li> <li>• NWP 1-11.01</li> <li>• OPTASK IW/C2W</li> <li>• TACNOTES/TACMEMOS</li> <li>• Threat Recognition CBT</li> </ul> |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | <p>You can expect questions about current threats to U.S. operations abroad, including land, sea, and air platforms, weapons, and sensor types and capabilities.</p> <p>.</p>   |

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| General EW3 <i>Skill</i> Area  | <b>Operational Planning</b>   |
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Determine electronic support (ES) equipment characteristics, limitations, and optimum sensor configurations.</b>   |
| <i>Knowledge</i> you should have to perform this skill:  | <ul style="list-style-type: none"> <li>• ES performance characteristics based on atmospheric data</li> <li>• ES system performance limitations</li> <li>• Optimum ES sensor configurations</li> </ul>   |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• AREPS Users Manual</li> <li>• EMCAP Users Guide</li> <li>• AN/SLA-10B Technical Manual</li> <li>• AN/SSQ-82(V)2 (MUTE) Technical Manual</li> <li>• AN/ULQ-16(V)2 Technical Manual</li> <li>• CM Set AN/SLQ-32(V)2, 3, 4, 5 Technical Manuals</li> <li>• CM Set AN/WLR-1H(V)5 Technical Manual</li> <li>• Mk 36 DLS Technical Manual</li> </ul> |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about atmospheric anomalies, EMI, EMCAP, and system performance specifications and limitations.  |



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| General EW3 <i>Skill Area</i>  | <b>Operational Planning</b>   |
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Verify friendly, neutral, and hostile force electronic fit; prepare electronic orders of battle (EOBs), emitter libraries, and hull-to-emitter (HULTEC) databases.</b>   |
| <i>Knowledge</i> you should have to perform this skill:  | <ul style="list-style-type: none"> <li>• Verification of friendly, neutral, and hostile forces</li> <li>• Order of Battle preparation</li> <li>• EOB preparation for friendly, neutral, and hostile forces</li> <li>• Automated emitter library construction</li> <li>• Own ship's electronic fit review</li> <li>• HULTEC database development and updating</li> </ul> |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• AFTTP 3-1 Vol. 2</li> <li>• EPL and EPL MIL SUPP</li> <li>• EWOBT Module 5</li> <li>• EWOBT Module 14</li> <li>• NWP 1-10.1</li> <li>• NWP 1-11.01</li> <li>• NWP 3-13.1.13</li> <li>• </li> </ul>   |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about friendly, neutral, and hostile force electronic fit; EOB preparation; development of emitter libraries; and preparation of hull-to-emitter databases.  |

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| General EW3 <i>Skill</i> Area  | <b>Operational Planning</b>   |
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Determine onboard weapons capabilities, recommend tactics, and review military deception plans.</b>  |
| <i>Knowledge</i> you should have to perform this skill:  | <ul style="list-style-type: none"> <li>• Onboard hard kill and soft kill weapons capabilities</li> <li>• Tactics using own force tactical decision aids</li> <li>• Ship' s military deception (MILDEC) plans</li> </ul> |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• AFTTP 3-1 Vol. 2</li> <li>• NWP 1-11.01</li> <li>• NWP 3-01.01</li> <li>• NWP 3-01.12</li> <li>• NWP 3-58.1</li> <li>• OPTASK IW/C2W</li> <li>• TACNOTES/TACMEMOS</li> </ul>   |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about weapons capabilities, general tactics, and military deception planning and implementation.   |

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|--|---|
| General EW3 <i>Skill</i> Area  | <b>Operational Planning</b>   |
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Prepare for watchstanding duties.</b>  |
| <i>Knowledge</i> you should have to perform this skill:  | <ul style="list-style-type: none"> <li>• Warfare commander reporting requirements</li> <li>• Ship's combat systems EW doctrine</li> <li>• Commanding Officer's (CO' s) standing/battle orders</li> <li>• Information Warfare (IW) publications</li> </ul> |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• ACP-125</li> <li>• ACP-165</li> <li>• JP 3-13</li> <li>• NWP 1-03.1</li> <li>• NWP 3-13.1.13</li> <li>• OPTASK IW/C2W</li> </ul>   |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about battle group communications, contents of the EW doctrine, CO's standing/ battle orders, and Information Warfare elements.  |

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| General EW3 <i>Skill Area</i>  | <b>Electronic Systems Operations</b>   |
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Prepare EW systems for watchstanding.</b>   |
| <i>Knowledge</i> you should have to perform this skill:  | <p>Procedures used to:</p> <ul style="list-style-type: none"> <li>• Energize and initialize EW systems</li> <li>• Perform EW systems on-line operational tests</li> <li>• Secure EW systems</li> <li>• Enable airborne data links</li> <li>• Assess EW systems degradations</li> <li>• Assess impact of EW systems casualties</li> </ul> |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• AN/SLA-10B Technical Manual</li> <li>• AN/SSQ-82(V)2 (MUTE) Technical Manual</li> <li>• AN/ULQ-16(V)2 Technical Manual</li> <li>• CM Set AN/SLQ-32(V)2, 3, 4, 5 Technical Manuals</li> <li>• CM Set AN/WLR-1H(V)5 Technical Manual</li> <li>• Mk 36 DLS Technical Manual</li> </ul>             |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions from each of the areas listed under <i>Knowledge</i> .  |

## Advancement Handbook for EW3

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|--|---|
| General EW3 <i>Skill</i> Area  | <b>Electronic Maintenance</b>   |
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Perform diagnostics and functional checks on ES, EA, and auxiliary equipment.</b>  |
| <i>Knowledge</i> you should have to perform this skill:  | <p>Procedures used to:</p> <ul style="list-style-type: none"> <li>• Perform functional checks on electronic attack (EA) , ES coolant, decoy launching, pulse analyzers, and blanker systems</li> <li>• Perform system diagnostic tests on EA and ES systems</li> </ul>  |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• OPNAVINST 4790.4</li> <li>• OPNAVINST 5100.19</li> <li>• AN/SLA-10B Technical Manual</li> <li>• AN/SSQ-82(V)2 (MUTE) Technical Manual</li> <li>• AN/ULQ-16(V)2 Technical Manual</li> <li>• CM Set AN/SLQ-32(V)2, 3, 4, 5 Technical Manuals</li> <li>• CM Set AN/WLR-1H(V)5 Technical Manual</li> <li>• Mk 36 DLS Technical Manual</li> </ul> |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about diagnostic procedures, PMS, equipment functional description, and common fault indications.  |

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|  |   |
|--|---|
| General EW3 <i>Skill Area</i>  | <b>Electronic Maintenance</b>   |
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Troubleshoot, repair, and perform alignments on ES, EA, and auxiliary equipment.</b>   |
| <i>Knowledge</i> you should have to perform this skill:  | <p>Procedures needed to:</p> <ul style="list-style-type: none"> <li>• Troubleshoot/repair components of EA, ES, coolant, decoy launching, blanker, and pulse analyzers systems</li> <li>• Align EA, ES, blanker and pulse analyzer systems</li> </ul>   |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• NWP 1-03.1</li> <li>• OPNAVINST 4790.4</li> <li>• OPNAVINST 5100.19</li> <li>• AN/SLA-10B Technical Manual</li> <li>• AN/SSQ-82(V)2 (MUTE) Technical Manual</li> <li>• AN/ULQ-16(V)2 Technical Manual</li> <li>• CM Set AN/SLQ-32(V)2, 3, 4, 5 Technical Manuals</li> <li>• CM Set AN/WLR-1H(V)5 Technical Manual</li> <li>• Mk 36 DLS Technical Manual</li> </ul> |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about PMS, equipment troubleshooting, alignments, fault documentation, parts procurement, and CASREPs.   |

# Advancement Handbook for EW3

| General EW3 <i>Skill</i> Area  | General Watchstanding   |
|--|---|
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Perform rapid emitter evaluation and analysis of electronic emissions.</b>   |
| <i>Knowledge</i> you should have to perform this skill:  | <p>Procedures needed to:</p> <ul style="list-style-type: none"> <li>• Perform rapid emitter evaluations</li> <li>• Evaluate intercepted electronic emissions</li> <li>• Perform emitter to platform correlation</li> <li>• Assess threats</li> <li>• Conduct analysis of target signal characteristics</li> </ul> |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• EPL and EPL MIL SUPP</li> <li>• EWOBT Module 5</li> <li>• NWP 1-10.1</li> <li>• NWP 1-11.01</li> </ul>   |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about rapid electronic emission functional analysis, platform correlation, threat analysis, and threat assessment.   |

# Advancement Handbook for EW3

| General EW3 <i>Skill</i> Area  | General Watchstanding  |
|--|--|
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Execute preplanned responses.</b>   |
| <i>Knowledge</i> you should have to perform this skill:  | <p>Ability to:</p> <ul style="list-style-type: none"> <li>• Execute preplanned responses</li> <li>• Recommend countermeasures</li> <li>• Initiate countermeasures</li> </ul> |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• NWP 3-13.1.13</li> <li>• OPTASK IW/C2W</li> <li>• TACNOTES/TACMEMOS</li> </ul>  |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about preplanned response procedures, generic countermeasures tactics, and the EW operator's actions.   |



## Advancement Handbook for EW3

| General EW3 <i>Skill</i> Area  | General Watchstanding   |
|--|---|
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Perform as the Emission Control (EMCON) Center, verify and monitor current EMCON condition, recommend and implement EMCON posture changes, and initiate electronic protection (EP).</b>  |
| <i>Knowledge</i> you should have to perform this skill:  | <p>Criteria used to:</p> <ul style="list-style-type: none"> <li>• Verify and monitor emission control (EMCON) conditions in effect</li> <li>• Monitor EMCON conditions in effect</li> <li>• Recommend and implement EMCON condition changes</li> <li>• Recommend and implement electronic protection (EP) procedures</li> </ul> |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• AN/SLA-10B Technical Manual</li> <li>• AN/SSQ-82(V)2 (MUTE) Technical Manual</li> <li>• EWOB Module 14</li> <li>• NWP 3-13.1.13</li> <li>• OPTASK IW/C2W</li> <li>• TACNOTES/TACMEMOS</li> </ul>   |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about EMCON bills; procedures for implementing, monitoring, and reporting various EMCON postures for ownship and battlegroup operations; and electronic protection procedures, capabilities, and limitations.  |

## Advancement Handbook for EW3

| General EW3 <i>Skill</i> Area  | General Watchstanding   |
|--|---|
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Establish watchstanding communications. Transmit, receive, and disseminate tactical information. Maintain EW logs.</b>   |
| <i>Knowledge</i> you should have to perform this skill:  | <ul style="list-style-type: none"> <li>• EW tactical information</li> <li>• Tactical transmission encoding and decoding</li> <li>• Authentication procedures of radio/telephone (R/T) communications</li> <li>• External EW reports</li> <li>• EW operational logs</li> </ul> |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• ACP 125</li> <li>• ACP 165</li> <li>• ACP 178</li> <li>• APP 1</li> <li>• ATP 1 Vol. I and II</li> <li>• NWP 3-13.1.13</li> <li>• OPTASK IW/C2W</li> <li>• RUM/RUTH Manual</li> </ul>  |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about EW tactical communications, prowords, authentication, priorities, standard phraseology, and content of EW operational logs.  |

## Part 2

### Advancement Handbook for EW2

## Advancement Handbook for EW2

|  |   |
|--|---|
| General EW2 <i>Skill</i> Area  | <b>Operational Planning</b>   |
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Direct, coordinate, and integrate all EW resources.</b>  |
| <i>Knowledge</i> you should have to perform this skill:  | <p>Procedures required to:</p> <ul style="list-style-type: none"> <li>• Direct EW module resources</li> <li>• Coordinate tactical EW operations</li> <li>• Coordinate unit support for MILDEC plans</li> <li>• Report changes in own ship's electronic fit</li> <li>• Integrate EW actions with own ship's offensive and defensive weapons systems</li> </ul> |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• APP 4 Vol. I and II</li> <li>• ATP 1 Vol. I and II</li> <li>• EWOBT Module 12</li> <li>• JP 3-13.1</li> <li>• JP 6-0</li> <li>• NWP 3-13.1.13</li> <li>• NWP 3-58.1</li> <li>• OPTASK IW/C2W</li> <li>• TACNOTES/TACMEMOS</li> </ul>   |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about EW module resources, resource management, message and voice reports, ownship and battlegroup tactical operations, MILDEC, and EW/weapons integration.  |

## Advancement Handbook for EW2

|  |   |
|--|---|
| General EW2 <i>Skill</i> Area  | <b>Operational Planning</b>   |
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Identify limitations and capabilities of combat systems and EP procedures.</b>   |
| <i>Knowledge</i> you should have to perform this skill:  | <ul style="list-style-type: none"> <li>• Limitations and capabilities of combat systems in EA environments</li> <li>• Limitations and capabilities of combat systems in high-density environments</li> <li>• EP procedures</li> </ul> |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• EMCAP Users Guide</li> <li>• EWOB Module 13</li> <li>• NWP 3-13.1.13</li> <li>• OPTASK IW/C2W</li> <li>• TACNOTES/TACMEMOS</li> </ul>  |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions from each of the areas listed under <i>Knowledge</i> .   |

## Advancement Handbook for EW2

|  |  |
|--|--|
| General EW2 <i>Skill</i> Area  | <b>Operational Planning</b>  |
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Request EW services in support of operational requirements and PMS.</b>   |
| <i>Knowledge</i> you should have to perform this skill:  | Procedures for drafting EA and EW range/service requests   |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• APP 4 Vol. I and II</li> <li>• EWOBT Module 14</li> <li>• FXP 3</li> <li>• OPTASK IW/C2W</li> </ul> |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about sources of various EW services, capabilities of EW services, and procedures used to request EW services.      |

## Advancement Handbook for EW2

|  |   |
|--|---|
| General EW2 <i>Skill</i> Area  | <b>Electronic Maintenance</b>   |
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Verify and install field change kits.</b>  |
| <i>Knowledge</i> you should have to perform this skill:  | <ul style="list-style-type: none"> <li>• Contents of field change kits</li> <li>• Procedures for installing field change kits</li> </ul>  |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• AN/SLA-10B Technical Manual</li> <li>• AN/SSQ-82(V)2 (MUTE) Technical Manual</li> <li>• AN/ULQ-16(V)2 Technical Manual</li> <li>• CM Set AN/SLQ-32(V)2, 3, 4, 5 Technical Manuals</li> <li>• CM Set AN/WLR-1H(V)5 Technical Manual</li> <li>• Cosal Use and Maintenance Manual</li> <li>• Mk 36 DLS Technical Manual</li> <li>• OPNAVINST 4790.4</li> <li>• OPNAVINST 43P6</li> <li>• OPNAVINST 5100.19</li> </ul> |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about the purpose of field changes, their contents, installation procedures, and documentation.  |

## Advancement Handbook for EW2

| General EW2 <i>Skill</i> Area  | General Watchstanding   |
|--|---|
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Integrate multisource information. Assess tactical situations (TACSITs) and fuse all source data to provide real-time and historical support.</b>  |
| <i>Knowledge</i> you should have to perform this skill:  | <p>Steps used to:</p> <ul style="list-style-type: none"> <li>• Integrate IW information</li> <li>• Assess tactical situations</li> <li>• Compile multisource data</li> </ul>  |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• EWOBT Module 11</li> <li>• EWOBT Module 14</li> <li>• FXP 3</li> <li>• JP 3-13.1</li> <li>• JP 6-0</li> <li>• NWP 3-13.1.13</li> <li>• OPTASK IW/C2W</li> <li>• TACNOTES/TACMEMOS</li> </ul> |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about tactical and strategic information resources, TACSIT levels and preplanned responses, and compilation and use of multi-source data.  |



## Advancement Handbook for EW2

| General EW2 <i>Skill</i> Area  | General Watchstanding  |
|--|--|
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Analyze EA effectiveness. Perform emission compatibility (EMCAP). Apply rules of engagement (ROE).</b>  |
| <i>Knowledge</i> you should have to perform this skill:  | <ul style="list-style-type: none"> <li>• Target signal characteristics to determine EA effectiveness</li> <li>• Emission compatibility (EMCAP) in support of ES</li> <li>• Rules of engagement (ROE) in the EW module</li> </ul> |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• AN/ULQ-16(V)2 Technical Manual</li> <li>• EMCP Users Guide</li> <li>• EWOBT Module 13</li> <li>• OPTASK IW/C2W</li> <li>• TACNOTES/TACMEMOS</li> </ul>                                  |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about target signal characteristic analysis, EMCAP, and ROE.  |

## Part 3

### Advancement Handbook for EW1

# Advancement Handbook for EW1

|  |  |
|--|--|
| General EW1 <i>Skill</i> Area  | <b>Operational Planning</b>  |
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Prepare EW section of ship' s Combat Systems Doctrine. Establish EMCON bills and procedures. Identify IW elements. Oversee ship' s MILDEC procedures.</b>   |
| <i>Knowledge</i> you should have to perform this skill:  | <ul style="list-style-type: none"> <li>• EMCON bills format criteria</li> <li>• EMCON bill procedures</li> <li>• Ship' s combat systems doctrine inputs</li> <li>• IW elements</li> <li>• Ship' s MILDEC modification recommendations</li> </ul> |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• EWOBT Module 14</li> <li>• IW/C2W CBT</li> <li>• JP 3-13</li> <li>• JP 3-13.1</li> <li>• JP 6-0</li> <li>• NWP 3-13.1.13</li> <li>• NWP 3-58.1</li> <li>• OPTASK IW/C2W</li> </ul>                      |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about EMCON bill format, EMCON setting and modification, IW elements, and military deception.   |

# Advancement Handbook for EW1

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|--|--|
| General EW1 <i>Skill</i> Area  | <b>Electronic Maintenance</b>  |
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Document Field Changes.</b>   |
| <i>Knowledge</i> you should have to perform this skill:  | <ul style="list-style-type: none"><li>• Forms and procedures used to document Field Changes</li></ul>                                  |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"><li>• OPNAVINST 4790.4</li><li>• OPNAVINST 43P6</li><li>• Cosal Use and Maintenance Manual</li></ul> |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about Field Change installation and documentation.  |

# Advancement Handbook for EW1

| General EW1 <i>Skill</i> Area  | General Watchstanding  |
|--|--|
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Supervise EW watch.</b>   |
| <i>Knowledge</i> you should have to perform this skill:  | <ul style="list-style-type: none"> <li>• Intercept guard assignments</li> <li>• Operational EW logs post analysis</li> </ul>   |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• ACP 125</li> <li>• ACP 165</li> <li>• APP 1</li> <li>• EWOBT Module 14</li> <li>• IW/C2W CBT</li> <li>• NWP 3-13.1.13</li> <li>• OPTASK IW/C2W</li> </ul> |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about spectrum management, log requirements, and maintaining watch logs.  |

## Part 4

### Advancement Handbook for EWC

# Advancement Handbook for EWC

|  |  |
|--|--|
| General EWC <i>Skill</i> Area  | <b>Operational Planning</b>  |
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Provide operational objectives, assess assets, and identify IW/C4I capabilities.</b>  |
| <i>Knowledge</i> you should have to perform this skill:  | <p>Criteria used to:</p> <ul style="list-style-type: none"> <li>• Provide EW operational objectives inputs</li> <li>• Assess availability of national assets</li> <li>• Identify IW/Command, Control, Communications, Computer, and Intelligence (C4I) connectivity capability requirements</li> </ul> |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• EWOBT Module 11</li> <li>• EWOBT Module 14</li> <li>• IW/C2W CBT</li> <li>• JP 3-13.1</li> <li>• JP 6-0</li> <li>• NSGTP Module 2</li> <li>• NSGTP Module 9</li> <li>• NSGTP Module 22</li> <li>• NWP 3-13.1.13</li> <li>• OPTASK IW/C2W</li> </ul>           |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about EW operational objectives, types of national assets, and IW/C4I capabilities.   |

# Advancement Handbook for EWC

|  |  |
|--|--|
| General EWC <i>Skill</i> Area  | <b>Electronic Systems Operations</b>   |
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Execute operational security.</b>   |
| <i>Knowledge</i> you should have to perform this skill:  | <ul style="list-style-type: none"><li>• Operational security (OPSEC) procedures</li></ul>                      |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"><li>• EWOBT Module 14</li><li>• EW/C2W CBT</li><li>• OPTASK IW/C2W</li></ul> |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about OPSEC references, procedures, and scope.  |



# Advancement Handbook for EWC

| General EWC <i>Skill</i> Area  | General Watchstanding  |
|--|--|
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Develop training scenarios.</b>   |
| <i>Knowledge</i> you should have to perform this skill:  | <ul style="list-style-type: none"> <li>• Various scenarios for embedded training devices</li> </ul>  |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• ACP 125</li> <li>• APP 1</li> <li>• ATP-1 Vol. I and II</li> <li>• EWOBT Module 5</li> <li>• EWOBT Module 11</li> <li>• EPL and EPL MIL SUPP</li> <li>• FXP 3</li> <li>• NWP 3-13.1.13</li> <li>• NWP 3-58.1</li> <li>• OPTASK IW/C2W</li> <li>• TACNOTES/TACMEMOS</li> </ul> |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about single ship and integrated training scenario development and implementation.  |

# Advancement Handbook for EWC

| General EWC <i>Skill</i> Area  | General Watchstanding  |
|--|--|
| A <i>skill</i> you are expected to perform from the General Skill Area above:                                  | <b>Perform spectrum management.</b>  |
| <i>Knowledge</i> you should have to perform this skill:  | <ul style="list-style-type: none"> <li>• Techniques and criteria for spectrum management</li> </ul>  |
| <i>References</i> you should study to gain the knowledge you need to perform this skill:                       | <ul style="list-style-type: none"> <li>• AREPS Users Manual</li> <li>• APP 1</li> <li>• ATP-1 Vol. I and II</li> <li>• EMCAP Users Guide</li> <li>• EWOBT Module 11</li> <li>• EWOBT Module 13</li> <li>• EWOBT Module 14</li> <li>• NWP 3-13.1.13</li> <li>• OPTASK IW/C2W</li> </ul> |
| <i>Exam Expectations.</i> These are subject areas you should know to help you answer exam questions correctly: | You can expect questions about single ship and battlegroup spectrum management.  |

# Appendix 1

## References Used in This Advancement Handbook

ACP 125

Instructions and Radiotelephone Procedures

ACP 165

Operational Brevity Code

ACP 178

Maritime Electronic Warfare Instructions

AFTTP 3-1 Vol. 2

Air Force Tactics, Techniques, and Procedures (Formerly MCM 3-1 Vol. 2)

AN/SLA-10B TM, NAVELEX 0967-LP-624-7010

AN/SSQ-82 (MUTE) TM, SE685-BK-OMI-010/SSQ-82(V)

AN/ULQ-16 (V) Pulse Analyzer, EE450-AC-MAN-010/AN/ULQ-16(V)

AN/SLQ-32 EA, EWOB Module 13 CD-rom

APP 1

Allied Maritime Voice Reporting Procedures

APP 4 Vol. 1

Allied Maritime Structured Messages

APP 4 Vol. 2

Allied Maritime Formatted Messages

AREPS Users Manual, Advanced Refractive Effects Prediction System Manual, V1.0

ATP 1 Vol. 1

Allied Maritime Tactical Instructions and Procedures, Rev. C

ATP 1 Vol. 2

Allied Maritime Tactical Signal and Maneuvering Book, Rev. C

BUPERSINST 1610.10

Navy Performance Evaluation and Counseling System

CM Set AN/SLQ-32(V)2, SE400-M2-MMO-XXX/SLQ-32(V2) Technical Manuals

CM Set AN/SLQ-32(V)3, SE400-M3-MMO-XXX/SLQ-32(V3) Technical Manuals

CM Set AN/SLQ-32(V)4, SE400-M4-MMO-XXX/SLQ-32(V4) Technical Manuals

CM Set AN/SLQ-32(V)5, SE400-M5-MMO-XXX/SLQ-32(V5) Technical Manuals

CM Set AN/WLR-1H(V)5, SE460-AB-OMI-XXX/WLR-1H(V5) Technical Manuals

Computers and INFOSEC, Basic Computers and Information Security CD-rom

EPL, ELINT Parameters List

EPL MIL SUPP, ELINT Parameters List, Military Supplement

EW Management, EWOBT Module 14 CD-rom

FXP 3

Strike Warfare (STW), Antisurface ship warfare (ASU), Intelligence (INT), Electronic Warfare (ELW), and Command, Control, and Communications (CCC) Exercises

Intro to Space Systems, EWOBT Module 11 CD-rom

IW/C2W Fundamentals, Information Warfare, Command and Control Warfare CD-rom

JMCIS, EWOBT Module 12 CD-rom

JP 3-13

Joint Doctrine for Information Operations

JP 3-13.1

Joint Doctrine for Command and Control Warfare (C2W)

JP 6-0

Doctrine for Command, Control, Communications, and Computers (C4) Systems  
Support to Joint Operations

Mk 36 DLS, Launching System Maintenance Manual, MK 36 MODs 1, 2, 5, 6, 8 thru 12 and 17  
thru 20, SW393-A1-MMM-010/MK36

Mk 53 DLS, Launching System Maintenance Manual, MK 53 MODs 1, 3, 4, SW393-C0-MMM-010

NAVPERS 15665  
U.S. Navy Uniform Regulations

NAVSUP P-485  
Afloat Supply Publication Vol. 1

NSG Module 2  
Fleet Operations: Command and Control Warfare and Electronic Warfare Systems,  
NSGTP 683-02-00-99

NSGTP Module 9  
Cryptologic Collection Equipments, NSGTP 683-09-00-96

NSGTP Module 22  
Fleet Operations: Orientation, NSGTP 683-22-00-97

NWP 1-01  
Naval Warfare Documentation Guide

NWP 1-03.1  
Operational Reports

NWP 1-03.41  
Maritime Reporting System Supplement 1

NWP 1-10.1  
Tactical Action Officer (TAO) Handbook

NWP 1-11.01  
Characteristics and Capabilities of U.S. Navy Combatant Ships

NWP 3-01.01  
Antiair Warfare

NWP 3-01.12  
Surface Ship Antiair Warfare (AAW) Tactics

NWP 3-13.1.13  
Electronics Warfare Coordination

NWP 3-13.1.14  
Naval Cryptologic Operations

NWP 3-58.1

Navy Operational Deception and Counterdeception

OPNAVINST 3430.26

Implementing Instruction for Information Warfare/Command and Control Warfare (IW/C2W)

OPNAVINST 43P6

Metrology Automated System for Uniform Recall and Reporting (MEASURE) Users Manual

OPNAVINST 4790.4C

Ship's Maintenance and Material Management (3-M) Manual

OPNAVINST 5100.19

Navy Occupational Safety and Health (NAVOSH) Program Manual for Forces Afloat  
Vol. 1, 2, 3

OPTASK IW/C2W

Fleetwide OPTASK Information Warfare/Command and Control Warfare

RUM Manual, Radio Users Manual

RUTH Manual, Radio Telephone Users Training Handbook

SECNAVINST 5510.30

DON Personnel Security Program

SECNAVINST 5510.36

DON Information Security Program (ISP) Regulation

SPAWAR E9407-AA-GYD-010

EMCAP Users Guide, Electromagnetic Compatibility Criteria for Surface Weapons Systems

SPCCINST 4441.170A

Cosal Use & Maintenance Manual

SVD OPS Software Rev. 17, AN/SLQ-32 Software Version Description Document

SVD SDT Software Rev. 10, ANSLQ-32 Software Version Description Document

TACMEMOS, Commander Surface Warfare Development Group Tactical Memorandums

TACNOTES, Commander Surface Warfare Development Group Tactical Notices

Threat Recognition 97, EWOBT Module 5 CD-rom